

**PETITION FOR REVIVAL OF AN INTERNATIONAL APPLICATION FOR PATENT
DESIGNATING THE U.S. ABANDONED UNINTENTIONALLY UNDER 37 CFR 1.137(b)**

Docket Number
(Optional)
112624.00029

First Named Inventor: Keim et al.

International (PCT) Application No.: PCT/US03/32887

U.S. Application No.: 10/531,159
(if known)

Filed: 14 October 2003

Title: Molecular Signature and Assay for Fluoroquinoline Resistance in Bacillus Anthracis

Attention: PCT Legal Staff
Mail Stop PCT
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

The above-identified application became abandoned as to the United States because the fees and documents required by 35 U.S.C. 371(c) were not filed prior to the expiration of the time set in 37 CFR 1.495(b) or (c) as applicable. The date of abandonment is the day after the date on which the 35 U.S.C. 371(c) requirements were due. See 37 CFR 1.495(h).

APPLICANT HEREBY PETITIONS FOR REVIVAL OF THIS APPLICATION

NOTE: A grantable petition requires the following items:

- (1) Petition fee
- (2) Proper reply
- (3) Terminal disclaimer with disclaimer fee which is required for all international applications having an international filing date before June 8, 1995; and
- (4) Statement that the entire delay was unintentional.

1. Petition fee

☒ Small entity - fee \$ 770 (37 CFR 1.17(m)). Applicant claims small entity status.
See 37 CFR 1.27.

☐ Other than small entity - fee \$ _____ (37 CFR 1.17(m))

2. Proper reply

A. The proper reply (the missing 35 U.S.C. 371(c) requirement(s)) in the form of
Submission under 35 U.S.C. 371 etc. _____ (identify type of reply):

☒ has been filed previously on April 12, 2005 _____.

☒ is enclosed herewith. A complete copy of the documents submitted on April 12, 2005 is enclosed.

[Page 1 of 2]

This collection of information is required by 37 CFR 1.137(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop PCT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

3. Terminal disclaimer with disclaimer fee

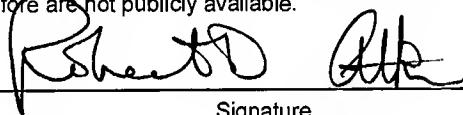
☒ Since this international application has an international filing date on or after June 8, 1995, no terminal disclaimer is required.

☐ A terminal disclaimer (and disclaimer fee (37 CFR 1.20(d)) of \$ _____ for a small entity or \$ _____ for other than a small entity) disclaiming the required period of time is enclosed herewith (see PTO/SB/63).

4. Statement. The entire delay in filing the required reply from the due date for the required reply until the filing of a grantable petition under 37 CFR 1.137(b) was unintentional.

WARNING:

Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.



Signature

January 8, 2008

Date

Robert D. Atkins

Typed or Printed Name

34,288

Registration Number, if applicable

QUARLES & BRADY LLP

Address

602-229-5290

Telephone Number

Two North Central Avenue, Phoenix, AZ 85004

Address

Enclosures: ☒ Response☒ Fee Payment☐ Terminal Disclaimer☐ Other (please identify):

JC10 Rec'd PCT/PTO 12 APR 2005

10/531159

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

The following documents have been received:

EV667329735US - Certificate of Mailing; Transmittal Letter to the United States Designated/Elected Office (DO/EO/US) Concerning a Submission under 35 U.S.C. 371 (2 pages); Preliminary Amendment (3 pages); Applicant Data Sheet (3 pages); Declaration (4 pages); Power of Attorney (4); Assignments (4), along with Recordation Form Cover Sheet; Verification Statement; Sequence Listing (28 pages); Diskette with copy of Sequence Listing; and return postcard.

Applicant :	Keim, Paul S.; Pearson, Talima; Price, Lance B.; B
Serial No. :	Pending
Patent No. :	N/A
Title:	Molecular Signatures and Assay for Fluoroquinolone Resistance in <i>Bacillus Anthracis</i>
Date:	4/11/2005
Our File:	112624.00029
Attorney:	RATKINS
Secretary:	MONEILL

QBSL IP Dept.

Received on 4/26/05

Docket for Copy to MKE (P)

EXPRESS MAIL CERTIFICATE: EV667329735US

I hereby certify that this correspondence listed below is being deposited with the United States Postal Service on the date set forth below as Express Mail in an envelope addressed to: Mail Stop PCT RO/US, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Date of Signature
and Deposit: April 11, 2005

By: 

(Signature of person depositing mail)

MARITZA O'NEILL

CERTIFICATE OF MAILING PURSUANT TO 37 C.F.R. 1.10

Applicant : Paul S. Keim *et al.*
Serial No. : To be assigned
Date of Filing : April 11, 2005
Title : *MOLECULAR SIGNATURE AND ASSAY FOR FLUOROQUINOLINE
RESISTANCE IN BACILLUS ANTHRACIS*
Art Unit : To be assigned
Examiner : To be assigned
Docket No. : 112624.00029

Mail Stop: PCT RO/US
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

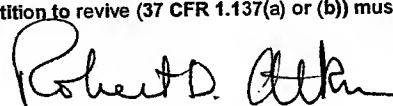
Type of Filing:

- 1) Transmittal Letter to the United States Designated/Elected Office (DO/EO/US) Concerning a Filing Under 35 U.S.C. 371 (2 pages) (in duplicate)
- 2) Preliminary Amendment (3 pages)
- 3) Application Data Sheet (3 pages)
- 4) Executed Declaration (4 pages)
- 5) Executed Power of Attorney (4)
- 6) Assignments (4), plus Recordation Form Cover Sheet
- 7) Verification Statement (1)
- 8) Paper copy of Sequence Listing (28 pages)
- 9) Diskette with copy of Sequence Listing
- 10) Return postcard

TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A SUBMISSION UNDER 35 U.S.C. 371		ATTORNEY'S DOCKET NUMBER 112624.00029 U.S. APPLICATION NO. (If known, see 37 CFR 1.5) To be assigned
INTERNATIONAL APPLICATION NO. PCT/US2003/032887	INTERNATIONAL FILING DATE 14 October 2003	PRIORITY DATE CLAIMED 11 October 2002
TITLE OF INVENTION MOLECULAR SIGNATURE AND ASSAY FOR FLUOROQUINOLINE RESISTANCE IN BACILLUS ANTHRACIS		
APPLICANT(S) FOR DO/EO/US Paul S. Keim, Talima Pearson, Lance Price, and Joseph D. Busch		
Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:		
<ol style="list-style-type: none"> 1. <input checked="" type="checkbox"/> This is a FIRST submission of items concerning a submission under 35 U.S.C. 371. 2. <input type="checkbox"/> This is a SECOND or SUBSEQUENT submission of items concerning a submission under 35 U.S.C. 371. 3. <input checked="" type="checkbox"/> This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (21) indicated below. 4. <input checked="" type="checkbox"/> The US has been elected (Article 31). 5. <input checked="" type="checkbox"/> A copy of the International Application as filed (35 U.S.C. 371(c)(2)) <ol style="list-style-type: none"> a. <input type="checkbox"/> is attached hereto (required only if not communicated by the International Bureau). b. <input type="checkbox"/> has been communicated by the International Bureau. c. <input checked="" type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US). 6. <input type="checkbox"/> An English language translation of the International Application as filed (35 U.S.C. 371(c)(2)). <ol style="list-style-type: none"> a. <input type="checkbox"/> is attached hereto. b. <input type="checkbox"/> has been previously submitted under 35 U.S.C. 154(d)(4). 7. <input checked="" type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3)) <ol style="list-style-type: none"> a. <input type="checkbox"/> are attached hereto (required only if not communicated by the International Bureau). b. <input type="checkbox"/> have been communicated by the International Bureau. c. <input type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired. d. <input checked="" type="checkbox"/> have not been made and will not be made. 8. <input type="checkbox"/> An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)). 9. <input checked="" type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)). 10. <input type="checkbox"/> An English language translation of the annexes of the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)). 		
Items 11 to 20 below concern document(s) or information included:		
<ol style="list-style-type: none"> 11. <input type="checkbox"/> An Information Disclosure Statement under 37 CFR 1.97 and 1.98. 12. <input checked="" type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included. 13. <input checked="" type="checkbox"/> A preliminary amendment. 14. <input checked="" type="checkbox"/> An Application Data Sheet under 37 CFR 1.76. 15. <input type="checkbox"/> A substitute specification. 16. <input checked="" type="checkbox"/> A power of attorney and/or change of address letter. 17. <input checked="" type="checkbox"/> A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 37 CFR 1.821- 1.825. 18. <input type="checkbox"/> A second copy of the published International Application under 35 U.S.C. 154(d)(4). 19. <input type="checkbox"/> A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4). 20. <input checked="" type="checkbox"/> Other items or information: Verification Statement and Return postcard. 		

This collection of information is required by 37 CFR 1.414 and 1.491-1.492. The information is required to obtain or retain a benefit by the public, which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 15 minutes to complete, including gathering information, preparing, and submitting the completed form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop PCT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

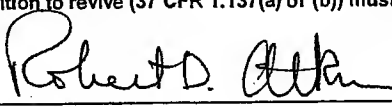
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

U.S. APPLICATION NO. (if known, see 37 CFR 1.5) To be assigned		INTERNATIONAL APPLICATION NO. PCT/US2003/032887		ATTORNEY'S DOCKET NUMBER 112624.00029	
The following fees have been submitted				CALCULATIONS	PTO USE ONLY
21. <input checked="" type="checkbox"/> Basic national fee.....		\$300		\$ 300.00	
22. <input checked="" type="checkbox"/> Examination fee If International preliminary examination report prepared by USPTO and all claims satisfy provisions of PCT Article 33(1)-(4).....		\$100		\$ 200.00	
All other situations.....		\$200			
23. <input checked="" type="checkbox"/> Search fee Search fee (37 CFR 1.445(a)(2)) has been paid on the international application to the USPTO as an International Searching Authority.....		\$100		\$ 100.00	
International Search Report prepared and provided to the Office.....		\$400			
All other situations.....		\$500			
TOTAL OF 21, 22 and 23 =				\$ 600.00	
<input type="checkbox"/> Additional fee for specification and drawings filed in paper over 100 sheets (excluding sequence listing or computer program listing filed in an electronic medium). The fee is \$250 for each additional 50 sheets of paper or fraction thereof.					
Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof (round up to a whole number)	RATE		
- 100 =	/50 =		x \$250	\$ 0.00	
Surcharge of \$130.00 for furnishing the oath or declaration later than 30 months from the earliest claimed priority date (37 CFR 1.492(e)).				\$ 0.00	
CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE	\$	
Total claims	22 - 20 =	2	x \$ 50	\$ 100.00	
Independent claims	3 - 3 =	0	x \$200	\$ 0.00	
MULTIPLE DEPENDENT CLAIM(S) (if applicable)			+ \$360	\$ 0.00	
TOTAL OF ABOVE CALCULATIONS =				\$ 700.00	
<input checked="" type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. Fees above are reduced by 1/2.				350.00	
SUBTOTAL =				\$ 350.00	
Processing fee of \$130.00 for furnishing the English translation later than 30 months from the earliest claimed priority date (37 CFR 1.492(f)).				\$ 0.00	
TOTAL NATIONAL FEE =				\$ 350	
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property				\$ 40.00	
TOTAL FEES ENCLOSED =				\$ 390.00	
				Amount to be refunded:	\$
				Amount to be charged:	\$ 390.00
<p>a. <input type="checkbox"/> A check in the amount of \$ _____ to cover the above fees is enclosed.</p> <p>b. <input checked="" type="checkbox"/> Please charge my Deposit Account No. <u>17-0055</u> in the amount of \$ <u>390.00</u> to cover the above fees. A duplicate copy of this sheet is enclosed.</p> <p>c. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. <u>17-0055</u>. A duplicate copy of this sheet is enclosed.</p> <p>d. <input type="checkbox"/> Fees are to be charged to a credit card. WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.</p>					
<p>NOTE: Where an appropriate time limit under 37 CFR 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the International Application to pending status.</p>					
<p>SEND ALL CORRESPONDENCE TO:</p> <p>Robert D. Atkins QUARLES & BRADY STREICH LANG LLP One Renaissance Square Two North Central Avenue Phoenix, AZ 85004</p>			<p style="text-align:center;"> _____ SIGNATURE Robert D. Atkins _____ NAME 34,288 _____ REGISTRATION NUMBER</p>		

TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A SUBMISSION UNDER 35 U.S.C. 371		ATTORNEY'S DOCKET NUMBER 112624.00029
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U.S. APPLICATION NO. (if known, see 37 CFR 1.5)		INTERNATIONAL APPLICATION NO.		ATTORNEY'S DOCKET NUMBER	
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22. <input checked="" type="checkbox"/> Examination fee If international preliminary examination report prepared by USPTO and all claims satisfy provisions of PCT Article 33(1)-(4)..... \$100 All other situations..... \$200				\$ 200.00	
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SEND ALL CORRESPONDENCE TO: Robert D. Atkins QUARLES & BRADY STREICH LANG LLP One Renaissance Square Two North Central Avenue Phoenix, AZ 85004					
				 SIGNATURE Robert D. Atkins NAME 34,288 REGISTRATION NUMBER	

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Paul S. Keim et al.
Serial No. : To be assigned
Date of Filing : April 11, 2005
Title : *MOLECULAR SIGNATURE AND ASSAY FOR FLUOROQUINOLINE
RESISTANCE IN BACILLUS ANTHRACIS*
Art Unit : To be assigned
Examiner : To be assigned

PRELIMINARY AMENDMENT

MAIL STOP: PCT RO/US
Commissioner for Patents
U.S. Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Prior to examination, please amend the above-identified application as set forth below:

Amendments to the Specification: Begin at page 2.

Amendments to the Claims: None.

Remarks: begin on page: begin on page 3.

IN THE SPECIFICATION:

Amend paragraph [00001] as follows:

CLAIM TO DOMESTIC PRIORITY

[00001] This application is a U.S. National Stage Application filed under 35 U.S.C. 371 claiming priority from the International Application No. PCT/US2003/032887, filed October 14, 2003, which claims the benefit of United States Provisional Patent Application Serial No. 60/417,843, filed October 11, 2002, and which applications are incorporated herein by reference. ~~This application claims priority to U.S. Provisional application Serial No. 60/417,843 entitled "Molecular Signature and Assay for Fluoroquinolone Resistance in *Bacillus Anthracis*" filed October 11, 2002, by Paul S. Keim *et al.*, and is herein incorporated by reference in its entirety.~~

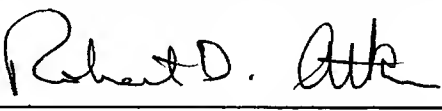
REMARKS

Applicants have amended the subject application and request consideration.

The Commissioner is authorized to charge any fees due in connection with this filing and during the pendency of this application, to Deposit Account No. **17-0055**.

Respectfully submitted,
QUARLES & BRADY STREICH LANG, LLP

April 11, 2005

By: 
Robert D. Atkins
Reg. No. 34,288

Attorney Docket No. 112624.00029

Address all correspondence to:

Robert D. Atkins
Quarles & Brady Streich Lang LLP
One Renaissance Square
Two North Central Avenue
Phoenix, AZ 85004
Telephone: 602-229-5311
Facsimile: 602-229-5690
Email: rda@quarles.com

Application Data Sheet

Application Information

Application number:	Pending
Filing Date:	April 11, 2005
Application Type:	Utility
Number of copies of CRF:	N/A
Title:	Molecular Signature and Assay for Fluoroquinoline Resistance in Bacillus Anthracis
Attorney Docket Number:	112624.00029
Request for Early Publication?:	No
Request for Non-Publication?:	No
Suggested Drawing Figure:	
Total Drawing Sheets:	2
Small Entity?:	Yes
Licensed US Govt. Agency:	None
Contract or Grant Numbers:	None

Applicant Information

Primary Citizenship Country:	United States
Given Name:	Paul
Middle Name:	S.
Family Name:	Keim
Name Suffix:	
City of Residence:	Flagstaff
State or Province of Residence:	Arizona
Country of Residence:	United States
Street of mailing address:	3115 W. Tina Lane
City of mailing address:	Flagstaff
State or Province of mailing address:	Arizona
Country of mailing address:	United States
Postal or Zip Code of mailing address:	86001

Applicant Information

Primary Citizenship Country: United States
Given Name: Talima
Middle Name:
Family Name: Pearson
Name Suffix:
City of Residence: Flagstaff
State or Province of Residence: Arizona
Country of Residence: United States
Street of mailing address: 1065 Tolani Place
City of mailing address: Flagstaff
State or Province of mailing address: Arizona
Country of mailing address: United States
Postal or Zip Code of mailing address: 86001

Applicant Information

Primary Citizenship Country: United States
Given Name: Lance
Middle Name: B.
Family Name: Price
Name Suffix:
City of Residence: Baltimore
State or Province of Residence: Maryland
Country of Residence: United States
Street of mailing address: 3720 Rexmere Road
City of mailing address: Baltimore
State or Province of mailing address: Maryland
Country of mailing address: United States
Postal or Zip Code of mailing address: 21218

Applicant Information

Primary Citizenship Country: United States
Given Name: Joseph
Middle Name: D.
Family Name: Busch
Name Suffix:
City of Residence: West Lafayette
State or Province of Residence: Indiana
Country of Residence: United States
Street of mailing address: P.O. Box 2641
City of mailing address: West Lafayette
State or Province of mailing address: Indiana
Country of mailing address: United States
Postal or Zip Code of mailing address: 47996

Correspondence Information

Correspondence Customer Number: 26707
Name: Quarles & Brady LLP
Street of mailing address: One Renaissance Square
Two North Central Avenue
City of mailing address: Phoenix
State or Province of mailing address: Arizona
Country of mailing address: United States
Postal or Zip Code of mailing address: 85004
Phone number: (602) 229-5311
Fax Number: (602) 229-5690
E-Mail address: rda@quarles.com

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DECLARATION FOR UTILITY OR DESIGN PATENT APPLICATION (37 CFR 1.63)

Declaration
Submitted
With Initial
Filing

OR

Declaration
Submitted after Initial
Filing (surcharge
(37 CFR 1.16 (e))
required)Attorney Docket
Number

112624.00029

First Named Inventor

Paul S. Keim

COMPLETE IF KNOWN

Application Number

To be assigned

Filing Date

Art Unit

To be assigned

Examiner Name

To be assigned

I hereby declare that:

Each inventor's residence, mailing address, and citizenship are as stated below next to their name.

I believe the inventor(s) named below to be the original and first inventor(s) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

**MOLECULAR SIGNATURE AND ASSAY FOR FLUOROQUINOLINE RESISTANCE IN
BACILLUS ANTHRACIS**

(Title of the invention)

the specification of which



is attached hereto

OR



was filed on (MM/DD/YYYY)

10/14/2003

as United States Application Number or PCT International

Application Number

PCT/US03/32287

and was amended on (MM/DD/YYYY)

(if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment specifically referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or (f), or 365(b) of any foreign application(s) for patent, inventor's or plant breeder's rights certificate(s), or 385(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent, inventor's or plant breeder's rights certificate(s), or any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number(s)	Country	Foreign Filing Date (MM/DD/YYYY)	Priority Not Claimed	Certified Copy Attached?	
				YES	NO
PCT/US2003/32287	PCT	10/14/2003	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

☐ Additional foreign application numbers are listed on a supplemental priority data sheet PTO/SB/02B attached hereto.

(Page 1 of 2)

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 21 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance completing the form, call 1-800-PTO-9199 and select option 2.

1819043

DECLARATION — Utility or Design Patent Application

Direct all correspondence to:	<input checked="" type="checkbox"/> The address associated with Customer Number.	26707	OR	<input type="checkbox"/> Correspondence address below
Name				
Address				
City		State	ZIP	
Country	Telephone		Fax	
I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.				
NAME OF SOLE OR FIRST INVENTOR:		<input type="checkbox"/> A petition has been filed for this unsigned inventor		
Given Name (first and middle (if any))		Family Name or Surname		
Paul S.		KEIM		
Inventor's Signature <i>Paul Keim</i>			Date 4/5/05	
Residence: City	State	Country	Citizenship	
Flagstaff	Arizona	United States	United States	
Mailing Address				
3115 W. Tina Lane				
City	State	Zip	Country	
Flagstaff	Arizona	86001	United States	
NAME OF SECOND INVENTOR:		<input type="checkbox"/> A petition has been filed for this unsigned inventor		
Given Name (first and middle (if any))		Family Name or Surname		
Talima		PEARSON		
Inventor's Signature <i>Talima Pearson</i>			Date 4/8/05	
Residence: City	State	Country	Citizenship	
Flagstaff	Arizona	United States	United States	
Mailing Address				
1065 Tolani Avenue Place				
City	State	Zip	Country	
Flagstaff	Arizona	86001	United States	
<input checked="" type="checkbox"/> Additional inventors or a legal representative are being named on the 1 supplemental sheet(s) PTO/SB/02A or 02LR attached hereto.				

Please type a plus sign (+) inside this box → ☐

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DECLARATION	ADDITIONAL INVENTOR(S) Supplemental Sheet Page <u>3</u> of <u>3</u>
--------------------	--

Name of Additional Joint Inventor, if any:		<input type="checkbox"/> A petition has been filed for this unsigned inventor	
Given Name (first and middle (if any))		Family Name or Surname	
Lance		PRICE	
Inventor's Signature <i>Lance Price</i>		Date <u>4/7/05</u>	
Residence: City Baltimore	State MD	Country U.S.	Citizenship U.S.
Mailing Address			
Mailing Address 3720 Rexmere Road			
City Baltimore	State MD	ZIP 21218	Country United States
Name of Additional Joint Inventor, if any:		<input type="checkbox"/> A petition has been filed for this unsigned inventor	
Given Name (first and middle (if any))		Family Name or Surname	
Joseph D.		BUSH	
Inventor's Signature		Date	
Residence: City West Lafayette	State IN	Country U.S.	Citizenship U.S.
Mailing Address			
Mailing Address P.O. Box 2641			
City West Lafayette	State IN	ZIP 47996	Country United States
Name of Additional Joint Inventor, if any:		<input type="checkbox"/> A petition has been filed for this unsigned inventor	
Given Name (first and middle (if any))		Family Name or Surname	
Inventor's Signature		Date	
Residence: City	State	Country	Citizenship
Mailing Address			
Mailing Address			
City	State	ZIP	Country

Please type a plus sign (+) inside this box → ☐

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DECLARATION		ADDITIONAL INVENTOR(S) Supplemental Sheet Page 3 of 3	
Name of Additional Joint Inventor, if any:		<input type="checkbox"/> A petition has been filed for this unsigned inventor	
Given Name (first and middle (if any))		Family Name or Surname	
Lance		PRICE	
Inventor's Signature		Date	
Residence: City Baltimore	State MD	Country U.S.	Citizenship U.S.
Mailing Address			
Mailing Address 3720 Rexmere Road			
City Baltimore	State MD	Zip 21218	Country United States
Name of Additional Joint Inventor, if any:		<input type="checkbox"/> A petition has been filed for this unsigned inventor	
Given Name (first and middle (if any))		Family Name or Surname	
Joseph D.		BUSH	
Inventor's Signature <i>Joseph D. Bush</i>		Date 4.9.2005	
Residence: City West Lafayette	State IN	Country U.S.	Citizenship U.S.
Mailing Address			
Mailing Address P.O. Box 2641			
City West Lafayette	State IN	Zip 47996	Country United States
Name of Additional Joint Inventor, if any:		<input type="checkbox"/> A petition has been filed for this unsigned inventor	
Given Name (first and middle (if any))		Family Name or Surname	
Inventor's Signature		Date	
Residence: City	State	Country	Citizenship
Mailing Address			
Mailing Address			
City	State	Zip	Country

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**POWER OF ATTORNEY
and
CORRESPONDENCE ADDRESS
INDICATION FORM**

Application Number	Pending
Filing Date	
First Named Inventor	Paul S. Keim
Title	Molecular Signature and Assay ..
Art Unit	To be assigned
Examiner Name	To be assigned
Attorney Docket Number	112624.00029

I hereby appoint:

☒ Practitioners associated with the Customer
Number:

26707

OR

☐ Practitioner(s) named below:

Name	Registration Number

as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith.

Please recognize or change the correspondence address for the above-identified application to:

☐ The address associated with the above-mentioned Customer Number:

OR

☐ The address associated with Customer Number:

OR

☐ Firm or
Individual Name

Address

City

State

Zip

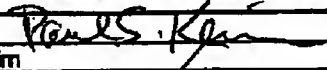
Country

Telephone

Fax

I am the:

☒ Applicant/Inventor.☐ Assignee of record of the entire interest. See 37 CFR 3.71.
Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/06)**SIGNATURE of Applicant or Assignee of Record**

Signature		Date	4-11-05
Name	Paul S. Keim	Telephone	928 523 1078
Title and Company			

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.

☒ *Total of 4 forms are submitted.

This collection of information is required by 37 CFR 1.31 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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Doc. No. 1919047

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and
CORRESPONDENCE ADDRESS
INDICATION FORM**

Application Number	Pending
Filing Date	
First Named Inventor	Paul S. Keim
Title	Molecular Signature and Assay ..
Art Unit	To be assigned
Examiner Name	To be assigned
Attorney Docket Number	112624.00029

I hereby appoint:

☒ Practitioners associated with the Customer Number:

26707

OR

☐ Practitioner(s) named below:

Name	Registration Number

as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith.

Please recognize or change the correspondence address for the above-identified application to:

☐ The address associated with the above-mentioned Customer Number:

OR

☐ The address associated with Customer Number:☐ Firm or Individual Name

Address

City

State

Zip

Country

Telephone

Fax

I am the:

☒ Applicant/Inventor.☐ Assignee of record of the entire interest. See 37 CFR 3.71.
Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)**SIGNATURE of Applicant or Assignee of Record**

Signature	<i>Talima Pearson</i>	Date	4/8/05
Name	Talima Pearson	Telephone	928-528-4290
Title and Company	Northern Arizona University		

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.

☒ Total of 4 forms are submitted.

This collection of information is required by 37 CFR 1.31 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9189 and select option 2.

Doc. No. 1919921

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U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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**POWER OF ATTORNEY
and
CORRESPONDENCE ADDRESS
INDICATION FORM**

Application Number	Pending
Filing Date	
First Named Inventor	Paul S. Keim
Title	Molecular Signature and Assay ..
Art Unit	To be assigned
Examiner Name	To be assigned
Attorney Docket Number	112624.00029

I hereby appoint:

☒ Practitioners associated with the Customer
Number:

26707

OR

☐ Practitioner(s) named below:

Name	Registration Number

as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith.

Please recognize or change the correspondence address for the above-identified application to:

☐ The address associated with the above-mentioned Customer Number:

OR

☐ The address associated with Customer Number:☐ Firm or
Individual Name

Address

City

State

Zip

Country

Telephone

Fax

I am the:

☒ Applicant/Inventor.☐ Assignee of record of the entire interest. See 37 CFR 3.71.
Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)

SIGNATURE of Applicant or Assignee of Record

Signature	<i>Lance Price</i>	Date	4/7/05
Name	Lance Price	Telephone	
Title and Company			

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.

☒ Total of 4 forms are submitted.

This collection of information is required by 37 CFR 1.31 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Doc. No. 1919918

**POWER OF ATTORNEY
and
CORRESPONDENCE ADDRESS
INDICATION FORM**

Application Number	Pending
Filing Date	
First Named Inventor	Paul S. Keim
Title	Molecular Signature and Assay ..
Art Unit	To be assigned
Examiner Name	To be assigned
Attorney Docket Number	112624.00029

I hereby appoint:

☒ Practitioners associated with the Customer Number:

26707

OR

☐ Practitioner(s) named below:

Name	Registration Number

as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith.

Please recognize or change the correspondence address for the above-identified application to:

☐ The address associated with the above-mentioned Customer Number:

OR

☐ The address associated with Customer Number:☐ Firm or
Individual Name
Address

City

State

Zip

Country

Telephone

Fax

I am the:

☒ Applicant/Inventor.☐ Assignee of record of the entire interest. See 37 CFR 3.71.
Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/56)

SIGNATURE of Applicant or Assignee of Record

Signature	<i>Joseph D. Busch</i>	Date	04.09.2005
Name	Joseph D. Busch	Telephone	765-532-2173
Title and Company			

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.

☒ Total of 4 forms are submitted.

This collection of information is required by 37 CFR 1.31 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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Doc. No. 1919923

**RECORDATION FORM COVER SHEET
PATENTS ONLY**

To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below.

1. Name of conveying party(ies)/Execution Date(s):Paul S. Keim
Talima Pearson
Lance Price
Joseph D. BuschExecution Date(s) 10/28/03; 10/24/03; 12/14/03; 10/11/04Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No**3. Nature of conveyance:**

- ☒ Assignment ☐ Merger
☐ Security Agreement ☐ Change of Name
☐ Government Interest Assignment
☐ Executive Order 9424, Confirmatory License
☐ Other _____

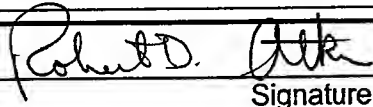
2. Name and address of receiving party(ies)Name: ARIZONA BOARD OF REGENTS,Internal Address: acting for and on behalf of,Northern Arizona UniversityStreet Address: c/o Arizona TechnologyEnterprises, LLC - 699 S. Mill AvenueCity: Brickyard Suite 601, 691AAState: Tempe, ArizonaCountry: United States Zip: 85281Additional name(s) & address(es) attached? ☐ Yes ☒ No**4. Application or patent number(s):**☒ This document is being filed together with a new application.

A. Patent Application No.(s)

B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No**5. Name and address to whom correspondence concerning document should be mailed:**Name: Robert D. AtkinsInternal Address: QUARLES & BRADY STREICH
LANG LLPStreet Address: One Renaissance Square
Two North Central AvenueCity: PhoenixState: Arizona Zip: 85004Phone Number: (602) 229-5311Fax Number: (602) 229-5690Email Address: rda@quarles.com**6. Total number of applications and patents involved:**1**7. Total fee (37 CFR 1.21(h) & 3.41) \$ 40**

- ☐ Authorized to be charged by credit card
☒ Authorized to be charged to deposit account
☐ Enclosed
☐ None required (government interest not affecting title)

8. Payment Informationa. Credit Card Last 4 Numbers _____
Expiration Date _____b. Deposit Account Number 17-0055Authorized User Name Robert D. Atkins**9. Signature:**

Signature

April 11, 2005

Date

Robert D. Atkins

Name of Person Signing

Total number of pages including cover
sheet, attachments, and documents:

5

Documents to be recorded (including cover sheet) should be faxed to (703) 306-5995, or mailed to:
Mail Stop Assignment Recordation Services, Director of the USPTO, P.O.Box 1450, Alexandria, V.A. 22313-1450

ASSIGNMENT AND AGREEMENT

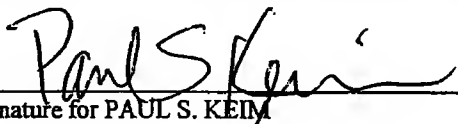
For good and valuable consideration, the receipt of which is hereby acknowledged, I, PAUL S. KEIM of Flagstaff, Arizona, have sold, assigned, and transferred, and do hereby sell, assign, and transfer unto ARIZONA BOARD OF REGENTS, acting for and on behalf of, NORTHERN ARIZONA UNIVERSITY (ABR/NAU), a non-profit organization of the State of Arizona, having its principal office in Tempe, State of Arizona, United States of America, and its successors, assigns, and legal representatives, the entire right, title, and interest in and to certain invention(s), entitled MOLECULAR SIGNATURES AND ASSAY FOR FLUOROQUINOLINE RESISTANCE IN BACILLUS ANTHRACIS, Attorney Docket No. 130588.00026, described, illustrated, and claimed in an application filed under the Patent Cooperation Treaty (PCT), together with the entire right, title and interest in and to any application for Letters Patent filed in the United States of America claiming priority to, claiming the invention described in, or otherwise based on, the PCT application, and in and to any continuation, continuation-in-part, division, reissue, reexamination, extension, renewal, or substitute thereof, and in and to any Letters Patent which may issue upon the application(s).

I hereby sell, assign, and transfer unto ABR/NAU, the entire right, title, and interest in and to application(s) for patent filed in all countries foreign to the United States of America, and in and to application(s) for patent filed under any and all international conventions and treaties, and in and to any patent issuing therefrom in foreign countries, which describe, illustrate, and claim the above-identified invention(s). I hereby also sell, assign, and transfer unto ABR/NAU, the entire right, title, and interest in and to all rights under any and all international conventions and treaties in respect of the above-identified invention(s). I authorize ABR/NAU to apply for patent in foreign countries directly in its own name, and to claim the priority of the filing date under the provisions of any and all domestic laws and international conventions and treaties.

I hereby authorize and request the Commissioner of Patents and Trademarks of the United States of America to issue Letters Patent upon the aforesaid application, continuation, continuation-in-part, division, reissue, reexamination, extension, renewal, or substitute, to ABR/NAU, for the sole use and behalf of ABR/NAU, its successors, assigns, and legal representatives, to the full end of the term for which the Letters Patent may be granted, the same as they would have been held and enjoyed by me had this assignment not been made. I authorize and request the equivalent authorities in foreign countries to issue the patents of their respective countries to and in the name of ABR/NAU in the same manner.

I agree that, when requested, I will, without charge to ABR/NAU, but at its expense, sign all papers, take all rightful oaths, and do all acts which may be necessary, desirable, or convenient for securing and maintaining patents for the invention(s) in any and all countries and for vesting title thereto in ABR/NAU, its successors, assigns, and legal representatives or nominees.

I covenant with ABR/NAU, its successors, assigns, and legal representatives, that the interest and property hereby conveyed is free from all prior assignment, grant, mortgage, license, or other encumbrance.



Signature for PAUL S. KEIM

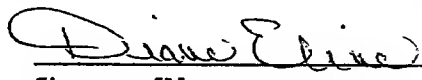
STATE OF ARIZONA)
COUNTY OF Maricopa)

I, Diane Eline, a Notary Public in and for the County and State aforesaid, do hereby certify that PAUL S. KEIM, whose name is subscribed to the foregoing instrument, appeared before me this day in person and acknowledged that he/she signed, sealed and delivered the instrument as his/her free and voluntary act and deed for the uses and purposes therein set forth.

Given under my hand and notarial seal this 28th day of October, 2003.



Notary Public State of Arizona
Maricopa County
Diane M Eline
Expires August 20, 2006



Signature of Notary

ASSIGNMENT AND AGREEMENT

For good and valuable consideration, the receipt of which is hereby acknowledged, I, TALIMA PEARSON of Flagstaff, Arizona, have sold, assigned, and transferred, and do hereby sell, assign, and transfer unto ARIZONA BOARD OF REGENTS, acting for and on behalf of, NORTHERN ARIZONA UNIVERSITY (ABR/NAU), a non-profit organization of the State of Arizona, having its principal office in Tempe, State of Arizona, United States of America, and its successors, assigns, and legal representatives, the entire right, title, and interest in and to certain invention(s), entitled MOLECULAR SIGNATURES AND ASSAY FOR FLUOROQUINOLINE RESISTANCE IN BACILLUS ANTHRACIS, Attorney Docket No. 130588.00026, described, illustrated, and claimed in an application filed under the Patent Cooperation Treaty (PCT), together with the entire right, title and interest in and to any application for Letters Patent filed in the United States of America claiming priority to, claiming the invention described in, or otherwise based on, the PCT application, and in and to any continuation, continuation-in-part, division, reissue, reexamination, extension, renewal, or substitute thereof, and in and to any Letters Patent which may issue upon the application(s).

I hereby sell, assign, and transfer unto ABR/NAU, the entire right, title, and interest in and to application(s) for patent filed in all countries foreign to the United States of America, and in and to application(s) for patent filed under any and all international conventions and treaties, and in and to any patent issuing therefrom in foreign countries, which describe, illustrate, and claim the above-identified invention(s). I hereby also sell, assign, and transfer unto ABR/NAU, the entire right, title, and interest in and to all rights under any and all international conventions and treaties in respect of the above-identified invention(s). I authorize ABR/NAU to apply for patent in foreign countries directly in its own name, and to claim the priority of the filing date under the provisions of any and all domestic laws and international conventions and treaties.

I hereby authorize and request the Commissioner of Patents and Trademarks of the United States of America to issue Letters Patent upon the aforesaid application, continuation, continuation-in-part, division, reissue, reexamination, extension, renewal, or substitute, to ABR/NAU, for the sole use and behalf of ABR/NAU, its successors, assigns, and legal representatives, to the full end of the term for which the Letters Patent may be granted, the same as they would have been held and enjoyed by me had this assignment not been made. I authorize and request the equivalent authorities in foreign countries to issue the patents of their respective countries to and in the name of ABR/NAU in the same manner.

I agree that, when requested, I will, without charge to ABR/NAU, but at its expense, sign all papers, take all rightful oaths, and do all acts which may be necessary, desirable, or convenient for securing and maintaining patents for the invention(s) in any and all countries and for vesting title thereto in ABR/NAU, its successors, assigns, and legal representatives or nominees.

I covenant with ABR/NAU, its successors, assigns, and legal representatives, that the interest and property hereby conveyed is free from all prior assignment, grant, mortgage, license, or other encumbrance.

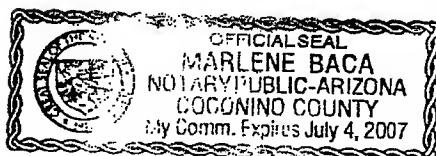



Signature for TALIMA PEARSON

STATE OF ARIZONA)
COUNTY OF Cocconino)

I, Marlene Baca, a Notary Public in and for the County and State aforesaid, do hereby certify that TALIMA PEARSON, whose name is subscribed to the foregoing instrument, appeared before me this day in person and acknowledged that he/she signed, sealed and delivered the instrument as his/her free and voluntary act and deed for the uses and purposes therein set forth.

Given under my hand and notarial seal this 24 day of Oct, 2003.





Signature of Notary

ASSIGNMENT AND AGREEMENT

For good and valuable consideration, the receipt of which is hereby acknowledged, I, LANCE PRICE of Baltimore, Maryland, have sold, assigned, and transferred, and do hereby sell, assign, and transfer unto ARIZONA BOARD OF REGENTS, acting for and on behalf of, NORTHERN ARIZONA UNIVERSITY (ABR/NAU), a non-profit organization of the State of Arizona, having its principal office in Tempe, State of Arizona, United States of America, and its successors, assigns, and legal representatives, the entire right, title, and interest in and to certain invention(s), entitled MOLECULAR SIGNATURES AND ASSAY FOR FLUOROQUINOLINE RESISTANCE IN BACILLUS ANTHRACIS, Attorney Docket No. 130588.00026, described, illustrated, and claimed in an application filed under the Patent Cooperation Treaty (PCT), together with the entire right, title and interest in and to any application for Letters Patent filed in the United States of America claiming priority to, claiming the invention described in, or otherwise based on, the PCT application, and in and to any continuation, continuation-in-part, division, reissue, reexamination, extension, renewal, or substitute thereof, and in and to any Letters Patent which may issue upon the application(s).

I hereby sell, assign, and transfer unto ABR/NAU, the entire right, title, and interest in and to application(s) for patent filed in all countries foreign to the United States of America, and in and to application(s) for patent filed under any and all international conventions and treaties, and in and to any patent issuing therefrom in foreign countries, which describe, illustrate, and claim the above-identified invention(s). I hereby also sell, assign, and transfer unto ABR/NAU, the entire right, title, and interest in and to all rights under any and all international conventions and treaties in respect of the above-identified invention(s). I authorize ABR/NAU to apply for patent in foreign countries directly in its own name, and to claim the priority of the filing date under the provisions of any and all domestic laws and international conventions and treaties.

I hereby authorize and request the Commissioner of Patents and Trademarks of the United States of America to issue Letters Patent upon the aforesaid application, continuation, continuation-in-part, division, reissue, reexamination, extension, renewal, or substitute, to ABR/NAU, for the sole use and behalf of ABR/NAU, its successors, assigns, and legal representatives, to the full end of the term for which the Letters Patent may be granted, the same as they would have been held and enjoyed by me had this assignment not been made. I authorize and request the equivalent authorities in foreign countries to issue the patents of their respective countries to and in the name of ABR/NAU in the same manner.

I agree that, when requested, I will, without charge to ABR/NAU, but at its expense, sign all papers, take all rightful oaths, and do all acts which may be necessary, desirable, or convenient for securing and maintaining patents for the invention(s) in any and all countries and for vesting title thereto in ABR/NAU, its successors, assigns, and legal representatives or nominees.


I covenant with ABR/NAU, its successors, assigns, and legal representatives, that the interest and property hereby conveyed is free from all prior assignment, grant, mortgage, license, or other encumbrance.


Signature for LANCE PRICE

STATE OF MARYLAND
COUNTY OF Baltimore

I, Rhonda Patrice Allen, a Notary Public in and for the County and State aforesaid, do hereby certify that LANCE PRICE, whose name is subscribed to the foregoing instrument, appeared before me this day in person and acknowledged that he/she signed, sealed and delivered the instrument as his/her free and voluntary act and deed for the uses and purposes therein set forth.

Given under my hand and notarial seal this 14th day of November, 2003.


Signature of Notary

RHONDA PATRICE ALLEN, NOTARY PUBLIC
STATE OF MARYLAND
CITY OF BALTIMORE
MY COMMISSION EXPIRES FEBRUARY 19, 2007

QBPHX\130588.00026\1787852.1

14th **SIGNED BEFORE ME THIS**
DAY OF November 2003

ASSIGNMENT AND AGREEMENT

For good and valuable consideration, the receipt of which is hereby acknowledged, I, JOSEPH D. BUSCH of West Lafayette, IN, have sold, assigned, and transferred, and do hereby sell, assign, and transfer unto ARIZONA BOARD OF REGENTS, acting for and on behalf of, NORTHERN ARIZONA UNIVERSITY (ABR/NAU), a non-profit organization of the State of Arizona, having its principal office in Tempe, State of Arizona, United States of America, and its successors, assigns, and legal representatives, the entire right, title, and interest in and to certain invention(s), entitled MOLECULAR SIGNATURES AND ASSAY FOR FLUOROQUINOLINE RESISTANCE IN BACILLUS ANTHRACIS, Attorney Docket No. 112624.00029, described, illustrated, and claimed in an application filed under the Patent Cooperation Treaty (PCT), together with the entire right, title and interest in and to any application for Letters Patent filed in the United States of America claiming priority to, claiming the invention described in, or otherwise based on, the PCT application, and in and to any continuation, continuation-in-part, division, reissue, reexamination, extension, renewal, or substitute thereof, and in and to any Letters Patent which may issue upon the application(s).

I hereby sell, assign, and transfer unto ABR/NAU, the entire right, title, and interest in and to application(s) for patent filed in all countries foreign to the United States of America, and in and to application(s) for patent filed under any and all international conventions and treaties, and in and to any patent issuing therefrom in foreign countries, which describe, illustrate, and claim the above-identified invention(s). I hereby also sell, assign, and transfer unto ABR/NAU, the entire right, title, and interest in and to all rights under any and all international conventions and treaties in respect of the above-identified invention(s). I authorize ABR/NAU to apply for patent in foreign countries directly in its own name, and to claim the priority of the filing date under the provisions of any and all domestic laws and international conventions and treaties.

I hereby authorize and request the Commissioner of Patents and Trademarks of the United States of America to issue Letters Patent upon the aforesaid application, continuation, continuation-in-part, division, reissue, reexamination, extension, renewal, or substitute, to ABR/NAU, for the sole use and behalf of ABR/NAU, its successors, assigns, and legal representatives, to the full end of the term for which the Letters Patent may be granted, the same as they would have been held and enjoyed by me had this assignment not been made. I authorize and request the equivalent authorities in foreign countries to issue the patents of their respective countries to and in the name of ABR/NAU in the same manner.

I agree that, when requested, I will, without charge to ABR/NAU, but at its expense, sign all papers, take all rightful oaths, and do all acts which may be necessary, desirable, or convenient for securing and maintaining patents for the invention(s) in any and all countries and for vesting title thereto in ABR/NAU, its successors, assigns, and legal representatives or nominees.

I covenant with ABR/NAU, its successors, assigns, and legal representatives, that the interest and property hereby conveyed is free from all prior assignment, grant, mortgage, license, or other encumbrance.




Signature for JOSEPH D. BUSCH

STATE OF INDIANA)
COUNTY OF Tippecanoe)

I, Sandra S. Exmeyer, a Notary Public in and for the County and State aforesaid, do hereby certify that JOSEPH D. BUSCH, whose name is subscribed to the foregoing instrument, appeared before me this day in person and acknowledged that he/she signed, sealed and delivered the instrument as his/her free and voluntary act and deed for the uses and purposes therein set forth.

Given under my hand and notarial seal this 11th day of October, 2004.


Signature of Notary

SONDRA S. EXMEYER
NOTARY PUBLIC STATE OF INDIANA
TIPPECANOE COUNTY
MY COMMISSION EXPIRES 10/17/07

QBPHX\1877168

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Paul S. Keim *et al.*
Serial No. : To be assigned
Date of Filing : April 11, 2005
Title : *MOLECULAR SIGNATURE AND ASSAY FOR FLUOROQUINOLINE
RESISTANCE IN BACILLUS ANTHRACIS*
Art Unit : To be assigned
Examiner : To be assigned

VERIFICATION STATEMENT

MS: PCT RO/US

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313

Dear Sir:

The undersigned, an attorney registered to practice before the U.S. Patent and Trademark Office and representing the applicants in the above-identified patent application does hereby state and affirm that the content of the printed sequence listing and the content of the sequence listing attached hereto in computer readable form are one and the same.

Dated in Phoenix, Arizona, this 11 day of April 2005.

Respectfully submitted,
QUARLES & BRADY STREICH LANG, LLP

April 11, 2005

By: 

Robert D. Atkins
Reg. No. 34,288

Attorney Docket No. 112624.00029

Address all correspondence to:

Robert D. Atkins

Quarles & Brady Streich Lang LLP

One Renaissance Square

Two North Central Avenue

Phoenix, AZ 85004

Telephone: 602-229-5311

Facsimile: 602-229-5690

Email: rda@quarles.com

SEQUENCE LISTING

<110> Keim, Paul S.

Pearson, Talima

Price, Lance

Busch, Joseph D.

<120> Molecular signatures and assay for fluoroquinoline resistance in
bacillus anthracis

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nnnnnnnnnn nnnccatcgt tgcataaaca gct 33

<210> 46
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<223> Bacillus anthracis

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<400> 46
nnnnnnnnnn nnnccatcgt ttataaaca gct 33

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37

<210> 49

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<400> 49

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37

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<213> Artificial

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41

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<210> 52

<211> 49

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<223> n is a, c, g, or t

<400> 53
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